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II.

THE PAST, PRESENT AND FUTURE
OF AMERICAN RAILWAYS.

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I N the year 1830 the first complete railway was put in operation. There had been many experiments leading up to this; in fact, in the world's history, all great improvements or inventions do not appear at once, but are attained by gradual steps and often appear in different places and through different persons, as though the idea had filled the air, as it were, and different people commenced to work on the same line. The world was ready at that time for something new. For the century ending with the year 1815 and the great and decisive battle of Waterloo, the civilized

world had been in a constant strife. Hardly a year had passed in which one or more of the great nations of Europe were not at war, and for much of the time all of them. The governments had been managed for the benefit of the few ; the condition of the common people had been almost hopeless ; every dollar that could be wrung from them by the most onerous taxation in the world had been used to build up armies and navies with which to fight. So oppressive was this system that in 1789 the French revolution broke out with its terrors. The people became like some wild animal liberated from his cage, and, knowing nothing of how to use that liberty, simply struck around in their fierce anger and destroyed whatever came in their way. Wise men, timid men, lovers of liberty, became frightened and disgusted. Reaction came, and on it Napoleon climbed to power. He soon lost his head and endeavored to rule the world, and the contest to crush him lasted for a score of years. In those years there was no opportunity for industrial improvement. No one attempted to accomplish anything except

to fight or to provide for the necessities of existence. When finally, in 1815, peace came to the civilized world, it dawned upon nations poor, weak and wounded. The condition of the poor was deplorable, and that of the rich not much better. The facilities of communication, even in countries of the highest civilization, at that time were very limited. For instance, the news of the battle of Waterloo did not reach London until three days afterwards, and it was then printed in the newspapers and sent over England in mail coaches that ran night and day, at the rate of seven or eight miles per hour.

In the few years of rest from war, between 1815 and 1830, which they had enjoyed, the people had done some work, and more thinking. In France the Bourbons with their despotic notions were driven out, and in England the people secured the "reform bill," so-called, and it was beginning to be understood all over the civilized world that governments were for the people and the divine right of kings to oppress and misgovern was disappearing. Slowly, as the nations began to recover from

their exhaustion, they devoted their time and energies to industrial improvement. The men in active life in 1815 knew nothing but war and its adjuncts. In 1830 a new generation was upon the stage, ready for another purpose. George Stephenson's railway was completed and civilization was ready to take it up and carry his ideas forward and beyond even his fondest dreams. In sixty-seven years this weakling has grown to be a giant of immense proportions, and has added vastly to the comfort and happiness of mankind. In 1830, when the first railway was opened, travel over any of the civilized countries of the world was slow and wearisome. Communities which to-day are neighbors, then knew but little of each other. England was the richest of the nations and the highest in civilization, and yet a writer at about that time, describing its internal affairs, says, "Each little community set apart from its fellows, following its own customs, cherishing its own prejudices, feeding its own traditions, speaking in a dialect which men from a distance failed to understand; a stranger was *ipso facto* an

enemy.” In our own country at this time civilization was even more backward. The people had settled and clustered along the coast and the great lakes and rivers, but the means of communication were slow and wearisome. At this time came the railway, and its development has been one of the greatest industrial revolutions in the world’s history. One writer truly says, “It has enabled men from different sections to meet freely, to learn how little there is on either side to hate and how much to love ; ancient prejudices melt away by the fuller knowledge gained from travel and acquaintance ; each year as men associate with each other and travel, the unity of the people becomes more and more perfect.”

While railways have benefited Europe and all civilized nations they have proved more of a blessing to America on account of its great distances. American genius also seems to be peculiarly adapted to the science of transportation and railroading. We have worked out in this country the most perfect system of transportation known on earth. In England the railways have had the

benefit of unlimited capital, and in some respects may be in advance of ours. The journeys there for short distances are more comfortable, but their system, if applied to our long lines, would be an utter failure. A trip to-day from New York to Chicago is not a thing to be dreaded, but a pleasure to be anticipated. With the trains and service, you have (in the parlance of railway advertising) "all the comforts and luxuries of home." The 3,500 miles between New York and San Francisco are covered in less than five days, with ease; so that even our invalids can avail themselves of the different climates and not grow weary with the journey. The expense of a journey to-day is not one-fifth of what it was in the old days of stage-coaching, saying nothing about time and comfort. Beyond any human calculation, however, is the benefit derived from association and the facilities of communication between different sections of the same country. It has enabled the American Republic to grow beyond any thought or prediction of its founders, and has rendered distant sections homogeneous to each other which otherwise would

have been distant and unknown countries. It is hard to realize what would have happened in this country of ours if the railway systems had not been perfected. The late William F. Reynolds, of this city of Lafayette, once told me that the hardest day's work he ever did was making a trip from Lebanon to Thorntown. To-day, on trains of the Big Four, you make the journey in ten minutes.

More, however, than in the facilities of travel has been the growth of the freight traffic of the various systems. The statistics of our railways are probably known to almost every schoolboy in the land, yet it is well on an occasion like this, when we have spoken of the birth of the enterprise, to allude to and place before your eyes its present gigantic stature, so that you may have the picture more vividly before you. The latest official figures which we have are those for the year ending June 30th, 1896, and they show such marvelous proportions that I can not forbear placing them before you. The industrial enterprise that started a half century or more ago, by the aid of a few

enthusiasts who were themselves doubtful of its success, has now grown to fabulous size ; 182,776 miles of main track ; 240,000 miles of all tracks. The little locomotive that George Stephenson ran from Manchester to Liverpool is now represented in these United States by 35,950 monster machines ; 1,297,649 cars are in service ; 511,772,737 passengers were carried in the year in question ; 765,891,385 tons of freight were handled ; the number of tons of freight carried one mile was 95,328,360,278. These figures are almost beyond the conception of the human mind ; and all this freight was moved at an average charge of four-fifths of one cent per ton per mile. Think of it ! A ton of freight hauled one mile at a charge of four-fifths of a cent. The gross earnings of all the railways were \$1,150,169,376. The number of employes upon the payrolls of the companies was 826,620. If you take into consideration those not upon the payrolls but deriving their support from the railways, and consider also the manufacturers of supplies used by the railways, you will probably thribble this number. In other

words, an army of more than 2,000,000 of men are engaged in railway business, and more than 10,000,000 of our population are supported by this industry.

I have said that it cost four-fifths of a cent per ton per mile to handle this immense amount of freight, but this is the average charge. The great products of the country, like flour, corn, wheat, coal and iron, are handled for less than one-half this charge, and this low cost has enabled this country to develop its manufactories and its commerce, until it stands foremost among the civilized nations of the earth. One hundred and ninety-one million tons of coal were mined and moved by the railways in this country last year. With the close of the century we shall stand undoubtedly first in the world in the mining of coal, the production of pig iron, the manufacture of flour and the production of wheat and corn. The world stands aghast at our growth, and the great factor in such increase has been the railways. We should have had even greater development, had it not been for unfortunate legis-

lation and hostility to railway corporations, which, in the last few years, has retarded their development. The cost of all the railways in this country has been \$10,566,865,771. The net income from their operation last year, in the aggregate, was only about \$377,000,000, or about $3\frac{1}{2}$ per cent. on their cost. Many of the lines paid more than this, but a vast number nothing; in fact, about one-fifth of all the railway mileage of the country last year was in bankruptcy, and managed by receivers appointed by the courts. Legislatures, National and State, and city governments nearly everywhere, seem to be hostile to these great enterprises.

I propose in the time I have here to give, briefly, a history of the causes which in my judgment have led up to this hostility and what is necessary to be done to change it. In the beginning of railway development capital was scarce and but few people were willing to invest in such a hazardous business, and the need of the communities was so great that any extraordinary concession asked for was quickly given. Even then, the first pro-

moters lost nearly all of their investment. But few of the great trunk lines which were constructed previous to 1855 were enabled to go through the panic of 1857 without bankruptcy; stocks of some of the best roads in the land, and which to-day are paying large dividends, went down to five and ten cents on the dollar, and many of them were entirely wiped out by foreclosure proceedings. With the close of the war in 1865 a new and enormous development commenced in railway building, and there came to the front then a practically new class of business men known as railway promoters. It was no unusual thing for these men to take contracts for building hundreds or even thousands of miles of railway. Their plan was to procure the most favorable charters from the States or the Government, to obtain large concessions in lands along the line, then organize a company, issue as many bonds per mile and as much stock as they thought the public would take, obtain from cities and towns as large subsidies as possible in money and promises; then make contracts with themselves

by which they received all the lands, subsidies, bonds and stock, for constructing the railway. They constructed it as cheaply as possible ; they sold the lands for the best price obtainable ; sold the bonds and stocks to the public ; and then marched on to take other contracts and conquer other lands. When the day of reckoning came, as it was bound to, the public found themselves the owners of bonds upon which the interest could not be paid ; the communities found themselves with a poor railway in which they had no direct pecuniary interest ; they saw the contractors with enormous fortunes, and they concluded that they had been cheated and robbed. Hence, through their Legislatures and city and town governments, they began to get back at the railways by imposing onerous taxes and obligations and by attempting to fix rates of fare and freight by legislation. This was the start of the so-called "Granger legislation" in the 70's. This legislation went through the various States and finally, in 1886, Congress passed the Interstate Commerce Law, and since that year the difficulties have been more with

reference to that law than with State laws. That law practically prohibited contracts among railways for the maintenance of tariffs; or, to be exact, it prohibited pooling, which is an agreement between two or more competing lines to divide the business in certain proportions; it being the judgment of railway managers then, and to-day, that in no other way can permanent and fair rates be obtained except by such division of business. Two individuals in trade can quarrel and sell goods below cost, and one of them soon becomes bankrupt and the other then employs him and holds all the business; but railways being public corporations continue to exist, and when they fail are managed by a receiver and become worse competitors than ever. It is said that the public get the benefit of this competition, but only a certain portion of the public. The large shippers are able to take advantage of this condition of affairs and make their contracts, avoiding the law through one way or another, and then they can undersell the small shipper and drive him out of business, and the result for the

last five years can be seen all over this country in the disappearance of the small shipper, the small manufacturer, and the growth of the larger. This is also true of communities; the effect of the Interstate Commerce Law has been to build up places like Chicago and break down places like LaFayette. The condition of affairs apparently culminated last spring in the decision of the Supreme Court of the United States in what was known as the "Trans-Missouri" case, in which that court held that the Sherman Anti-Trust Law applied to railways, and therefore practically any association or agreement was illegal, and since then the railways have been in a chaotic state, rates irregular, the earnings diminishing, and their patrons, the public, suffer; investors have become frightened, foreigners have sent home and sold our bonds and stocks; and out of these troubled times has grown the business of reorganizing railways, until nearly one-third of the mileage of the country has been sold under the hammer and reorganized. The old stockholders have lost their investment or else have secured a new interest by

paying large assessments. In addition to this, the different States and cities and counties have inaugurated a system of taxation by which all bonds and stocks of railway companies have been subject to listing and taxation, although the corporation paid the taxes upon the property itself. That is, a party in Indiana owning bonds or stocks in a railway is compelled to list them and pay taxes upon them, while if he lived in New York he would not. You can see at once that the Indiana man will sell his securities to the New York man, for, while the rate of taxation may be light, it is enough to change the investment. The result has been that the local communities have sold their bonds and stock; the investments have drifted to Wall Street, and the bonds and shares of our principal railways are to-day used simply as counters are used in a game of cards, to mark the speculative gains or losses of the holders. This is the most unhealthy condition to which a great business enterprise can arrive, and we must bear in mind in considering this question that there is no one business that involves so much the pros-

perity and happiness of the people as that of the railways ; the entire community uses them. The railways of this country, as heretofore stated, employ nearly a million of men in their operation. There are more employed directly in the manufacture of supplies which are used by the railways, and this army of men, with the families dependent upon them, constitute about one-fifth of our population, all of whom are dependent upon the railways. The prosperity of the railways is their prosperity ; the loss of the railways is their loss. There can be no prosperous times in this country unless the railways prosper. No body politic can be healthy when one-fourth or one-fifth of it is diseased.

What is the future ? There must be changes in legislation and in the management of railways. Some plan must be adopted to increase the ownership in railways by parties residing along their lines. The first great step towards doing this must be a reform in the tax laws, so that citizens of Indiana or other States can be put upon as favorable terms for ownership of bonds and stock in a rail-

way as citizens of New York. Greater permanence must be given to the condition and ownership of railways. It would be a great step if we could adopt the English method and create debentures instead of bonds ; or, in other words, provide that there should be no foreclosure for non-payment of interest. Such a thing as foreclosure of a railway in England is unknown. If the interest is not paid upon the debentures, there may be a receiver of the profits, but the stockholder still holds his interest in the property. Here, with our system of bonds, if there come a few bad years, when the interest is defaulted, the bondholder takes possession and sells it under his mortgage, the interest of the stockholder is extinguished, and when prosperity returns he has lost his opportunity to get his share of it. This makes the possession of railway stocks speculative and uncertain ; in fact, for years they have been more subject to assessments than to the receipt of dividends. If our form of mortgage could be changed to that of the English debenture, it would stop the immense number of reorganizations, and would

prevent values being wiped out in times of panic, and would encourage investment by the people in the securities of these enterprises—for, after all, that is the real improvement that is to come. The New England railways have less trouble with Legislatures and courts, chiefly because they have a great many small holders of stocks along their lines and in the cities, each of whom is an agent of the corporation and aids in creating public sentiment and procuring fair treatment, while in the great Central States and in the West there are scarcely stockholders enough to provide the officers for a stockholders' meeting. The railway officials themselves must be taught to conduct their business with care and with due respect to the rights of the people. Their actions must not be secret, but above board and open to the public. There must be but one rate to everybody, and that must be reasonable, and the Legislatures must provide remedies by which railway officials can agree with each other on these rates and their contracts can be enforced. The present State and national laws in reference to railways are crude and crazy-

patch works, passed in some cases out of revenge for wrongs, real or fancied, and in others for political effect, and all in opposition to the railways. Unfortunately, railway officials have opposed all legislation that looked to the control of their powers, and have not tried to direct and perfect the laws as they might have done. There should be clear and positive legislation authorizing railways to contract with each other for the maintenance of tariffs and the division of business, and it should be made the duty of the Government Commissioners, and they should have the power in such cases to see that rates are reasonable, and their decisions as to whether reasonable or not should govern, subject to appeal to the courts.

The improvement of the country demands that the great articles of export, like cotton, wheat, flour, corn and meats, should be carried at the lowest possible rates. The railways should pattern after the English system, and while making extraordinarily low rates for these great articles, should exact a terminal upon the higher classes of freight and upon freight carried short distances, so

as to provide interest upon the immense terminals they have to have. In other words, while a railway from Chicago to New York may possibly haul corn for fifteen cents per hundred pounds without loss, it could not haul it for 100 miles on anything like a proportion of this rate without great loss. The same is true of many articles that enter into railway traffic. Therefore, in order that the country may be benefited by having its great articles of export and of manufacture carried cheaply, there should be a terminal charge affixed to other traffic which would enable the stockholders to receive something for the very large investment they have to make in every city and town for facilities wherewith to do their business.

Passenger rates are made entirely upon the wrong basis. We charge the same for the man who rides in the palace car, and for whom the railway has to haul two tons of dead weight, as we do for the man who rides in the ordinary coach, and for whom only one-half a ton of dead weight is hauled. We charge practically the same for the passenger who is carried sixty miles

an hour on the fast and expensive train as we do for the passenger upon the slow and less expensive train. These rates should be changed and graded.

Above all, a better understanding must be arrived at with the vast army of employes. They must have greater interest in the success of the railways, and they must be a part of the power that will produce a better understanding with the communities which the railways serve. This must be done by a system of hospitals, pensions and profit-sharing.

Probably locomotives propelled by electricity will come in the future. If not, something else may. And we can not tell what the next years have in store in the way of improving our railway facilities. Higher speed, possibly cheaper trains, but it is necessary to this country of ours that the railways should be encouraged, so that they may go on improving their systems, so that branch lines can be built to every county seat in the country. Instead of stopping at 182,000 miles of railway we should build at least five thousand miles a year in

short and inexpensive lines as feeders to the main systems, so that the days of the stage coach and the heavy wagons should be unknown. This country will soon have one hundred millions of people. It will require at least 250,000 miles of railways to serve them properly—an increase of 40 per cent. over the present mileage. They can not be built, they can not be improved and increased, with the present system of legislation, and with the present prejudice against them. The development of the country demands that this must be changed. It is through such institutions as this, it is through such students as these, that the change must come. In the centuries that have gone, the youth of the various countries sought fame and preferment in war and its accompaniments. We live in better days and in a higher civilization, but the service of our railways offers a wider field for advancement, and for fame, than anything of old. The road to success in this line is not through carnage and suffering, but it is none the less sure and requires equally moral courage and intelligence. A new evangel must

be preached in reference to railways ; they must be placed upon a higher order, and instead of being pariahs in business, they must be the benefactors and friends of all.

I want to add just one word with reference to Purdue. I had no idea, until I came here to-day, that it was so great an institution as it is. I had learned to respect your President. I had known what hard work he did, and I thought he was building up something here, but I had no notion whatever that he had accomplished so much or raised such a foundation as he has. I congratulate you that your lines are laid in such pleasant places. You can learn here what it takes years and years of hard work to learn practically if you are going to learn it at the bench, or firing an engine or at work on the railway. The great English world, the great end, is to get rid of what I call the dollar-a-day man, or the man who does the drudgery, and who never gets above it. This college of yours enables you to start above that, and all you have to do is to improve your opportunities and the fortunes of the world are within



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your grasp. As I went through these halls to-day it carried me back to the times when I was a student and a teacher, and I could not help thinking how many more privileges you have than we had years ago, and what a glorious opportunity you have here to learn something practical and practicable, so that when you go out from these halls, instead of going to the drudgery of what I call a dollar-a-day man, you can start on a higher basis, where you can do credit to yourselves and to your university.